

**Amendments to the Claims:**

This listing of claims will replace all prior versions and listings of claims in the application:

**Listing of Claims:**

Claim 1 (Currently amended): A method of optimizing traffic in an internetwork, the method comprising:

selecting a subset of flows in the internetwork for monitoring, wherein the subset of flows includes one of one flow, some flows, and all flows;

measuring performance characteristics of the subset of flows in at least a portion of the internetwork, the performance characteristics including one or more of: a plurality of one or more round trip measurements for each of the subset of flows and a plurality of one or more one-way measurements for each of the subset of flows, the measuring performance characteristics including one or more of:

launching a first plurality of one or more packets, and measuring the first plurality of one or more packets;

measuring a second plurality of one or more packets in the internetwork, wherein the second plurality of one or more packets were already launched;

monitoring a first plurality of one or more flows in the internetwork, duplicating one or more packets from the plurality of one or more flows, and measuring the one or more duplicated packets;

serving as a proxy hop for a second plurality of one or more flows, and measuring the second plurality of one or more flows; and

encoding material within a third plurality of one or more flows, causing a fourth plurality of one or more flows to be generated, wherein the third plurality of one or more flows traverses a first path of the internetwork, and the fourth plurality of one or more flows traverses a second path of the internetwork, wherein at least a portion of the first path of the internetwork and at least a portion of the second path of the internetwork are equal, and measuring a subset of the fourth plurality of one or more flows;

calculating at least one performance metric for the subset of flows in the at least a portion of the internetwork, the at least one performance metric at least partly determined from the measured performance characteristics; and

in response to calculating the at least one performance metric, rearchitecting the internetwork to optimize one or more of the least one performance metric using peer-to-peer communications, rearchitecting the internetwork including at least one of:

altering a plurality of one or more routing tables in the internetwork, wherein the plurality of one or more routing tables include at least one of: network-layer routing tables, layer 3 routing tables, IP routing tables, layer 2 forwarding tables, and MPLS forwarding tables; redirecting the subset of flows to a second internetwork coupled to the internetwork at one or more Points of Presence; and  
affecting forwarding decisions of the subset of flows, by imposing one or more of: NAT, GRE, and tunneling techniques other than GRE.

Claim 2 (Original): The method of claim 1, wherein the plurality of one or more routing tables includes network-layer routing tables.

Claim 3 (Original): The method of claim 1, wherein the plurality of one or more routing tables includes layer 3 routing tables.

Claim 4 (Original): The method of claim 1, wherein the plurality of one or more routing tables includes IP routing tables.

Claim 5 (Original): The method of claim 1, wherein the plurality of one or more routing tables includes layer 2 routing tables.

Claim 6 (Original): The method of claim 1, wherein the plurality of one or more routing tables includes MPLS forwarding tables.

Claim 7 (Original): The method of claim 1, wherein the performance characteristics includes the plurality of one or more round trip measurements.

Claim 8 (Original): The method of claim 1, wherein the performance characteristics includes the plurality of one or more one-way measurements.

Claim 9 (Original): The method of claim 1, wherein the one or more of the at least one performance metric to be optimized quantifies path performance of the subset of flows.

Claim 10 (Currently amended): The method of claim 9, wherein the one or more of the at least one performance metric characterizes a quality of a network application.

Claim 11 (Original): The method of claim 10, wherein the application includes http.

Claim 12 (Original): The method of claim 10, wherein the application includes ftp.

Claim 13 (Original): The method of claim 10, wherein the application includes telnet.

Claim 14 (Original): The method of claim 10, wherein the application includes voice.

Claim 15 (Original): The method of claim 10, wherein the application include video.

Claim 16 (Original): The method of claim 1, wherein one or more of the at least one performance metric quantifies one or more of: overall usage of the at least the portion of the internetwork, absolute individual network link usage in the at least the portion of the internetwork, relative individual network link usage in the at least the portion of the internetwork, and link usage cost in the at least the portion of the internetwork.

Claim 17 (Currently amended): The method of claim 1, wherein the subset of flows include at least a first sub-plurality of one or more flows [[,]] and a second sub-plurality of one or more flows, and the first sub-plurality of one or more flows uses at least a first measured performance characteristic, and the second sub-plurality of one or more flows uses at least a second measured performance characteristic.

Claim 18 (Original): The method of claim 1, wherein the one or more of the at least one performance metric quantifies geographic distance covered by the subset of flows in the internetwork.

Claim 19 (Original): The method of claim 1, wherein the selection of the subset of flows is user-based in the at least the portion of the internetwork.

Claim 20 (Original): The method of claim 1, wherein the internetwork comprises an autonomous sub-system of a larger network.

Claim 21 (Original): The method of claim 20, wherein the larger network is the Internet.

Claim 22 (Original): The method of claim 20, wherein the internetwork is a BGP autonomous system.

Claim 23 (Original): The method of claim 1, wherein the internetwork comprises an autonomous system of a larger network.

Claim 24 (Original): The method of claim 23, wherein the larger network is the Internet.

Claim 25 (Original): The method of claim 23, wherein the internetwork is a BGP autonomous system.

Claim 26 (Original): The method of claim 1, wherein the internetwork comprises an overlay network.

Claim 27 (Original): The method of claim 1, wherein the internetwork comprises a plurality of one or more networks, the plurality of one or more networks coupled together, wherein the plurality of one or more networks include one or more of local-area networks, metropolitan-area networks, and wide-area networks.

Claim 28 (Original): The method of claim 1, wherein the measuring performance characteristics includes launching a first plurality of one or more packets, and measuring the first plurality of one or more packets.

Claim 29 (Original): The method of claim 28, wherein the measuring performance characteristics includes launching a first plurality of one or more round-trip packets, and measuring the first plurality of one or more round-trip packets, such that the plurality of one or more round trip measurements include round trip measurements for the launched packets.

Claim 30 (Original): The method of claim 29, wherein the first plurality of one or more round-trip packets include traceroute ICMP packets.

Claim 31 (Original): The method of claim 29, wherein the first plurality of one or more round-trip packets include ping ICMP packets.

Claim 32 (Original): The method of claim 29, wherein the first plurality of one or more round-trip packets include telnet packets.

Claim 33 (Original): The method of claim 29, wherein the first plurality of one or more round-trip packets include TCP packets from an empty TCP transaction.

Claim 34 (Original): The method of claim 29, wherein the first plurality of one or more round-trip packets include http packets.

Claim 35 (Original): The method of claim 28, wherein the measuring performance characteristics includes launching a first plurality of one or more one-way packets, and measuring the first plurality of one or more one-way packets, such that the plurality of one or more one-way measurements include one-way measurements for the launched packets.

Claim 36 (Currently amended): The method of 1, wherein the measuring performance characteristics includes measuring a second plurality of one or more packets in the internetwork, wherein the second plurality of one or more packets were already launched.

Claim 37 (Original): The method of claim 1, wherein round-trip measurements include one or more of round-trip delay, round-trip jitter, round-trip loss, round-trip available bandwidth, and round-trip total bandwidth.

Claim 38 (Original): The method of claim 37, wherein round-trip measurements include round-trip delay.

Claim 39 (Original): The method of claim 37, wherein round-trip measurements include round-trip jitter.

Claim 40 (Original): The method of claim 37, wherein round-trip measurements include round-trip loss.

Claim 41 (Original): The method of claim 37, wherein round-trip measurements include round-trip available bandwidth.

Claim 42 (Original): The method of claim 37, wherein round-trip measurements include round-trip total bandwidth.

Claim 43 (Original): The method of claim 1, wherein one-way measurements include one or more of one-way delay, one-way jitter, one-way loss, one-way available bandwidth, and one-way total bandwidth.

Claim 44 (Original): The method of claim 43, wherein one-way measurements include one-way delay.

Claim 45 (Original): The method of claim 43, wherein one-way measurements include one-way jitter.

Claim 46 (Original): The method of claim 43, wherein one-way measurements include one-way loss.

Claim 47 (Original): The method of claim 43, wherein one-way measurements include one-way available bandwidth.

Claim 48 (Original): The method of claim 43, wherein one-way measurements include one-way total bandwidth.

Claim 49 (Currently amended): The method of claim 1, wherein rearchitecting the internetwork includes altering a plurality of one or more routing tables in the internetwork, ~~wherein the plurality of one or more routing tables include at least one of: network-layer routing tables, layer 3 routing tables, IP routing tables, layer 2 forwarding tables, and MPLS forwarding tables.~~

Claim 50 (Original): The method of claim 49, wherein the altering of the plurality of one or more routing tables is applied automatically.

Claim 51 (Original): The method of claim 49, wherein the altering of the plurality of one or more routing tables includes configuring a plurality of one or more routers, wherein the configuring the plurality of one or more routers statically alter the routing of flows.

Claim 52 (Original): The method of claim 51, wherein the configuring a plurality of one or more routers includes route maps.

Claim 53 (Original): The method of claim 51, wherein the configuring a plurality of one or more routers includes static route statements.

Claim 54 (Original): The method of claim 49, wherein the altering of the plurality of one or more routing tables includes configuring a plurality of one or more routers, wherein the configuring the plurality of one or more routers adjust the processing of dynamic routing updates.

Claim 55 (Original): The method of claim 49, wherein the altering of the plurality of one or more routing tables includes configuring a plurality of one or more routers, wherein the configuring the plurality of one or more routers adjust the processing of dynamic routing updates.

Claim 56 (Original): The method of claim 49, wherein the altering of the plurality of one or more routing tables is performed at least partly by a plurality of one or more dynamic routing protocols.

Claim 57 (Original): The method of claim 56, wherein the plurality of one or more dynamic routing protocols includes BGP.

Claim 58 (Original): The method of claim 56, wherein the plurality of one or more dynamic routing protocols includes a plurality of one or more IGP routing protocols.

Claim 59 (Original): The method of claim 58, wherein the plurality of one or more IGP routing protocols includes OSPF.

Claim 60 (Original): The method of claim 49, wherein the altering of the plurality of one or more routing tables are applied manually by a user.

Claim 61 (Original): The method of claim 1, wherein the rearchitecting of the internetwork includes redirecting the subset of flows to a second internetwork coupled to the internetwork at one or more Points of Presence.

Claim 62 (Original): The method of claim 61, wherein the redirecting of the subset of flows is at least partly across an exit point traversed by at least a portion of the subset of flows from the internetwork, wherein the at least one performance metric is optimized.

Claim 63 (Original): The method of claim 1, wherein the optimizing of the performance metric includes:

calculating at least one performance metric for a plurality of one or more paths in the at least the portion of the internetwork; and

at least partly responsive to the calculating of the at least one performance metric,  
selecting a path in the at least the portion of the internetwork from the plurality of one or more paths.

Claim 64 (Original): The method of claim 63, wherein the selected path is a direct path.

Claim 65 (Original): The method of claim 63, wherein the selected path is an indirect path.

Claim 66 (Original): The method of claim 1, wherein the optimizing of the performance metric includes:

selecting a plurality of one or more exit points; and

selecting a plurality of one or more paths to reach the plurality of one or more exit points in the at least the portion of the internetwork.

Claim 67 (Currently amended): The method of claim 66, wherein the steps of selecting the plurality of one or more exit points and selecting the plurality of one or more paths are performed separately.

Claim 68 (Currently amended): The method of claim 66, wherein the steps of selecting the plurality of one or more exit points and selecting the plurality of one or more paths are performed together.

Claim 69 (Original): The method of claim 1, wherein the measuring performance characteristics includes monitoring a first plurality of one or more flows in the internetwork, duplicating one or more packets from the plurality of one or more flows, and measuring the one or more duplicated packets.

Claim 70 (Original): The method of claim 1, wherein the measuring performance characteristics includes serving as a proxy hop for a second plurality of one or more flows, and measuring the second plurality of one or more flows.

Claim 71 (Original): The method of claim 1, wherein the measuring performance characteristics includes encoding material within a third plurality of one or more flows, causing a fourth plurality of one or more flows to be generated, wherein the third plurality of one or more flows traverses a first path of the internetwork, and the fourth plurality of one or more flows traverses a second path of the internetwork, wherein at least a portion of the first path of the internetwork and at least a portion of the second path of the internetwork are equal, and measuring a subset of the fourth plurality of one or more flows.

Claim 72 (Original): The method of claim 1, wherein the measuring performance characteristics is done at least partly using flow information export.

Claim 73 (Original): The method of claim 1, wherein the measuring performance characteristics is done using RMON II.

Claim 74 (Original): The method of claim 1, wherein the measuring performance characteristics is provided by a source external to the subset of flows.

Claim 75 (Original): A method of optimizing traffic in an internetwork, the method comprising:  
selecting a subset of flows in the internetwork for monitoring, wherein the subset of flows includes one of one flow, some flows, and all flows;

measuring performance characteristics of the subset of flows in at least a portion of the internetwork, the performance characteristics including one or more of: a plurality of one or more round trip measurements for each of the subset of flows and a plurality of one or more one-way measurements for each of the subsets of flows, the measuring performance characteristics includes one or more of:

measuring a second plurality of one or more packets in the internetwork, wherein the second plurality of one or more packets were already launched;

monitoring a first plurality of one or more flows in the internetwork, duplicating one or more packets from the plurality of one or more flows, and measuring the one or more duplicated packets;

serving as a proxy hop for a second plurality of one or more flows, and measuring the second plurality of one or more flows, and

encoding material within a third plurality of one or more flows, causing a fourth plurality of one or more flows to be generated, wherein the third plurality of one or more flows traverses a first path of the internetwork, and the fourth plurality of one or more flows traverses a second path of the internetwork, wherein at least a portion of the first path of the internetwork and at least a portion of the second path of the internetwork are equal, and measuring a subset of the fourth plurality of one or more flows;

calculating at least one performance metric for the subset of flows in the at least a portion of the internetwork, the at least one performance metric at least partly determined from the measured performance characteristics; and

in response to calculating the at least one performance metric, affecting the routing of the subset of flows by altering a plurality of one or more DNS entries in the internetwork.

Claim 76 (Currently amended): A network systems, comprising:

a plurality of one or more network devices configured such that, when the plurality of one or more network devices is deployed in an internetwork, the plurality of one or more network devices performs:

selecting a subset of flows in the networks for monitoring, wherein the subset of flows includes one of one flow, some flows, and all flows;

measuring performance characteristics of the subset of flows in at least a portion of the internetwork, the performance characteristics including one or more of: a plurality of one or more round trip measurements for each of the subset of flows and a plurality of one or more one-way measurements for each of the subset of flows, the measuring performance characteristics including one or more of:

launching a first plurality of one or more packets, and measuring the first plurality of one or more packets;

measuring a second plurality of one or more packets in the internetwork, wherein the second plurality of one or more packets were already launched;

monitoring a first plurality of one or more flows in the internetwork, duplicating one or more packets from the plurality of one or more flows, and measuring the one or more duplicated packets;

serving as a proxy hop for a second plurality of one or more flows, and measuring the second plurality of one or more flows; and

encoding material within a third plurality of one or more flows, causing a fourth plurality of one or more flows to be generated, wherein the third plurality of one or more flows traverses a first path of the internetwork, and the fourth plurality of one or more flows traverses a second path of the internetwork, wherein at least a portion of the first path of the internetwork and at least a portion of the second path of the internetwork are equal, and measuring a subset of the fourth plurality of one or more flows;

calculating at least one performance metric for the subset of flows in the at least a portion of the internetwork, the at least one performance metric at least partly determined from the measured performance characteristics; and

in response to calculating the at least one performance metric, rearchitecting the internetwork to optimize one or more of the at least one performance metric using peer-to-peer communications, rearchitecting the internetwork including at least one of:

altering a plurality of one or more routing tables in the internetwork, wherein the plurality of one or more routing tables include at least one of: network-layer routing tables, layer 3 routing tables, IP routing tables, layer 2 forwarding tables, and MPLS forwarding tables; redirecting the subset of flows to a second internetwork coupled to the internetwork at one or more Points of Presence; and  
affecting forwarding decisions of the subset of flows, by imposing one or more of: NAT, GRE, and tunneling techniques other than GRE.

Claim 77 (Original): The network system of claim 76, where the rearchitecting of the internetwork is performed within the device.

Claim 78 (Original): A network systems, comprising:

a plurality of one or more network devices configured such that, when the plurality of one more network devices is deployed in an internetwork, the plurality of one or more network devices performs:

selecting a subset of flows in the internetwork for monitoring, wherein the subset of flows includes one or one flow, some flows, and all flows;

measuring performance characteristics of the subset of flows in at least a portion of the internetwork, the performance characteristics including one or more of: a plurality of one or more round trip measurements for each of the subset of flows and a plurality of one or more one-way measurements for each of the subset of flows, the measuring performance characteristics including one or more of:

measuring a second plurality of one or more packets in the internetwork, wherein the second plurality of one or more packets were already launched;

monitoring a first plurality of one or more flows in the internetwork, duplicating one or more packets from the plurality of one or more flows, and measuring the one or more duplicated packets;

serving as proxy hop for a the second plurality of one or more flows; and measuring the second plurality of one or more flows, and

encoding material within a third plurality of one or more flows, causing a fourth plurality of one or more flows to be generated, wherein the third plurality of one or more flows traverses a first path of the internetwork, and the fourth plurality of one or more flows traverses a second path of the internetwork, wherein at least a portion of the second path of the internetwork and at

least a portion of the second path of the internetwork are equal, and measuring a subset of the fourth plurality of one or more flows;

calculating at least one performance metric for the subset of flows in the at least a portion of the internetwork, the at least one performance metric at least partly determined from the measured performance characteristics; and

in response to calculating the at least one performance metric, affecting the routing of the subset of flows by altering a plurality of one or more DNS entries in the internetwork

**Claim 79 (Original):** The network system of claim 78, where the affecting the routing of the subset of flows is performed within the device.

**Claim 80 (Withdrawn):** A method of populating a plurality of one or more groups with a plurality of one or more network addresses, the method comprising:

selecting a plurality of one or more metrics, the plurality of one or more metrics including one or more of path performance, network cost, network usage, geographical proximity, topological proximity, and statistical similarity;

creating the plurality of one or more groups in one or more network devices, network devices, network devices including one or more of servers, forwarding devices, and routing devices;

populating each of the plurality of one or more groups with a subset of the plurality of one or more network addresses based on at least a classification function, the classification function at least partly determined by at least one of the plurality of one or more metrics; and

including one or more network addresses from one or more groups of the plurality of one or more groups in a plurality of one or more routing tables distributed across the internetwork.

**Claim 81 (Withdrawn):** The method of claim 80, wherein at least path performance is selected.

**Claim 82 (Withdrawn):** The method of claim 80, wherein at least network cost is selected.

**Claim 83 (Withdrawn):** The method of claim 80, wherein at least network usage is selected.

**Claim 84 (Withdrawn):** The method of claim 80, wherein at least geographical proximity is selected.

Claim 85 (Withdrawn): The method of claim 80, wherein at least topological proximity is selected.

Claim 86 (Withdrawn): The method of claim 80, wherein at least statistical similarity is selected.

Claim 87 (Withdrawn): The method of claim 80, wherein the at least the classification function includes a plurality of one or more criteria, the plurality of one or more criteria including at least one of topological proximity and administrative policy, wherein the topological proximity includes one or more of adjacency and dependency, and the administrative policy includes one or more of address aggregation and user-defined policy.

Claim 88 (Withdrawn): The method of claim 87, wherein the plurality of one or more criteria includes at least topological proximity, wherein the topological proximity includes one or more of adjacency and dependency.

Claim 89 (Withdrawn): The method of claim 87, wherein the plurality of one or more criteria includes at least administrative policy, wherein the administrative policy includes one or more of address aggregation and user-defined policy.

Claim 90 (Withdrawn): The method of claim 80, wherein, after the populating, the plurality of one or more groups includes a group, the group including network addresses corresponding to the plurality of one or more metrics having a value in a pre-defined range.

Claim 91 (Withdrawn): The method of claim 80, wherein, after the populating, the plurality of one or more groups includes clusters created by a clustering algorithm applied to at least one of the plurality of one or more metrics.

Claim 92 (Withdrawn): The method of claim 80, wherein the selecting, the creating, and the classifying are performed at a central server in an autonomous system.

Claim 93 (Withdrawn—currently amended): The method of claim 80, wherein the selecting, the creating, and the classifying are [[are]] performed at a plurality of one or more distributed servers distributed through a plurality of one or more autonomous systems.

Claim 94 (Withdrawn): The method of claim 80, wherein the selecting, creating, and populating are repeated, at least partly responsive to one or more of: a change in the at least one of the plurality of one or more metrics, an expiration of a time period, and an external input.

Claim 95 (Withdrawn): The method of 94, wherein the selecting, creating, and populating are repeated, at least partly responsive to the change in the at least one of the one or more metrics.

Claim 96 (Withdrawn): The method of 94, wherein the selecting, creating, and populating are repeated, at least partly responsive to the expiration of a time period.

Claim 97 (Withdrawn): The method of 94, wherein the selecting, creating, and populating are repeated, at least partly responsive to the external input.

Claim 98 (Withdrawn): The method of 94, wherein, prior to the change, a first plurality of one or more groups is populated, and after the change, a second plurality of one or more groups is populated, and the first plurality of one or more groups is at least partly different from the second plurality of one or more groups.

Claim 99 (Withdrawn): The method of claim 80, further comprising:

prior to populating the plurality of groups, creating a default population for at least one of the plurality of one or more groups, wherein the default population is derived at least partly from an observed routing table.

Claim 100 (Withdrawn): The method of claim 99, wherein the observed routing table is from an autonomous system, such that each of the plurality of network addresses is reachable by the autonomous system.

Claim 101 (Withdrawn): The method of claim 99, wherein the default population is a subset of the observed routing are performed on an existing routing table.

Claim 102 (Withdrawn): The method of 101, wherein after selecting, creating, and populating are performed on the existing routing table, any changes to the existing routing table are limited to combining two or more entries into one group.

Claim 103 (Withdrawn): The method of 101, wherein after selecting, creating, and populating are performed on the existing routing table, changes to the existing routing table include dividing at least one entry into two or more groups.

Claim 104 (Withdrawn): The method of claim 80, further comprising:

prior to populating the plurality of groups, creating a default population for at least one of the plurality of one or more groups, wherein the default population is derived at least partly from observed network traffic.

Claim 105 (Withdrawn): The method of claim 80, wherein the selecting, creating, and populating are performed in a first autonomous system.

Claim 106 (Withdrawn): The method of claim 105, further comprising:

prior to populating the plurality of groups, creating a default population for at least one of the plurality of one or more groups, wherein the default population is derived at least partly from an observed routing table.

Claim 107 (Withdrawn): The method of 105, wherein the observed routing table is from the first autonomous system.

Claim 108 (Withdrawn): The method of 105, wherein the observed routing table is from a second autonomous system.

Claim 109 (Withdrawn): The method of claim 80, wherein at least one subset of the plurality of one or more groups includes contiguous addresses.

Claim 110 (Withdrawn): The method of claim 80, wherein at least one subset of the plurality of one or more groups includes at least two discontiguous addresses.

Claim 111 (Withdrawn): The method of claim 80, where the plurality of one or more network addresses includes one or more IP addresses.

Claim 112 (Withdrawn): A network system, comprising:

a plurality of one or more network devices, the plurality of network devices including one or more of servers, forwarding devices, and routing devices, the plurality of network devices populating a plurality of one or more groups with a plurality of one or more network addresses by performing:

responsive to 1) selecting a plurality of one or more metrics, the plurality of one or more metrics including one or more of path performance, network cost, network usage, geographical proximity, topological proximity, and statistical similarity, and 2) creating the plurality of one or more groups in one or more network devices, network devices including one or more of servers, forwarding devices, and routing devices,

populating each of the plurality of one or more groups with a subset of the plurality of one or more network addresses based on at least a classification function, the classification function at least partly determined by at least one of the plurality of one or more metrics; and

including one or more network addresses from one or more groups of the plurality of one or more groups in a plurality of one or more routing tables distributed across the internetwork.

Claim 113 (Withdrawn): A network system, comprising:

a plurality of one or more network devices, the plurality of network devices including one or more of servers, forwarding devices, and routing devices, the plurality of network devices populating a plurality of one or more groups with a plurality of one or more network addresses by performing:

selecting a plurality of one or more metrics, the plurality of one or more metrics including one or more of path performance, network cost, network usage, geographical proximity, topological proximity, and statistical similarity;

creating the plurality of one or more groups in one or more network devices, network devices including one or more of servers, forwarding devices, and routing devices,

populating each of the plurality of one or more groups with a subset of the plurality of one or more network addresses based on at least a classification function, the classification function at least partly determined by at least one of the plurality of one or more metrics; and

including one or more network addresses from one or more groups of the plurality of one or more groups in a plurality of one or more routing tables distributed across the internetwork.

Claim 114 (Withdrawn): A network system, comprising:

a plurality of one or more network devices, the plurality of network devices including one or more of servers, forwarding devices, and routing devices, the plurality of network devices populating a plurality of one or more groups with a plurality of one or more network addresses by performing:

responsive to selecting a plurality of one or more metrics, the plurality of one or more metrics including one or more of path performance, network cost, network usage, geographical proximity, topological proximity, and statistical similarity;

creating the plurality of one or more groups in one or more network devices, network devices including one or more of servers, forwarding devices, and routing devices;

populating each of the plurality of one or more groups with a subset of the plurality of one or more network addresses based on at least a classification function, the classification function at least partly determined by at least one of the plurality of one or more metrics; and

including one or more network addresses from one or more groups of the plurality of one or more groups in a plurality of one or more routing tables distributed across the internetwork.

**Claim 115 (Withdrawn): A network system , comprising:**

a plurality of one or more network devices, the plurality of network devices including one or more of servers, forwarding devices, and routing devices, the plurality of network devices populating a plurality of one or more groups with a plurality of one or more network addresses by performing:

selecting a plurality of one or more metrics, the plurality of one or more metrics including one or more of path performance, network cost, network usage, geographical proximity, topological proximity, and statistical similarity;

responsive to creating the plurality of one or more groups in one or more network devices, network devices including one or more of servers, forwarding devices, and routing devices,

populating each of the plurality of one or more groups with a subset of the plurality of one or more network addresses based on at least a classification function, the classification function at least partly determined by at least one of the plurality of one or more metrics; and

including one or more network addresses from one or more groups of the plurality of one or more groups in a plurality of one or more routing tables distributed across the internetwork.

Claim 116 (New): The method of claim 1, wherein the subset of flows is selected based on a rate of incoming requests.

Claim 117 (New): The method of claim 1, wherein the subset of flows is selected based on applying thresholds to statistics related to the flows.

Claim 118 (New): The method of claim 1, wherein the subset of flows is based on costs of paths related to the flows, bandwidth consumed over a period of time, or both.